

Application No. 10/719,028
Amendment dated November 5, 2007
Reply to Office Action of August 7, 2007

3

Docket No.: 80254(302741)

REMARKS

Claims 1-4 are pending in this application, of which claims 1 and 4 have been amended.
No new claims have been added.

Claims 1-4 stand rejected under 35 U.S.C. §103(a) as unpatentable over Santhoff in view of Weaver, Jr. et al. (both previously applied).

As noted in Applicant's response filed April 24, 2007, Santhoff discloses an ultra-wideband geographic location system, and FIG. 13 shows UWB units 1110 which can relay information to UWB requesting unit 1105.

Santhoff fails to disclose any delay between the reception and transmission of the UWB pulses, and the delay taught by Weaver, Jr. et al. is for CDMA spread spectrum signals, which are not individual pulses, as are the UWB pulse signals.

The Examiner has urged:

Santhoff teaches transmitting timing different from the receiving timing by a pulse unit in order to prevent a sneak path wave between the receiver and the transmitter (see page 6, paragraph 0071) in which superposition pulsed or adjacent pulse ignore by the receiver to decrease interfering pulse and transmission can be postponed or delay acknowledging response.

Applicant respectfully disagrees.

Page 6, paragraph [0071] of Santhoff discloses that the probability of the second responses from multiple devices interfering with each other is decreased by choosing the multiple access channels at random "and/or the transmission can be postponed by random delays."

These "random delays" are in contrast to the present invention as disclosed in paragraph [0055] of the substitute specification, which states:

The transmitting/receiving timing controller 28 establishes the delay time of the delay unit 27 so that the timing (transmitting timing) of transmitting the received and relayed pulse

Application No. 10/719,028
Amendment dated November 5, 2007
Reply to Office Action of August 7, 2007

4

Docket No.: 80254(302741)

signals does not overlap the receiving timing. Also, where the period of received signals is already known, it is possible to determine the delay time in advance.

More specifically, page 6, paragraph [0071] of Santhoff discloses that the superposition of multiple coincident responses using pulse position modulation (a preferred modulation scheme) may lead to disallowed pulse adjacency at the receiver. Because the problem is superposition of multiple coincident responses, the problem concerning interference between the transmitter and the receiver is not mentioned.

In order to solve the above problem, the requesting device of Santhoff induces the responding devices to retransmit their responses. Santhoff further discloses that since the problem lies in the probability that second responses from multiple devices will interfere with each other, in order to solve this problem, these multiple access channels can be chosen at random and/or the transmission can be postponed by random delays. Therefore, the problem concerning the interference between the transmitter and the receiver is not mentioned therein, nor is there any mention of the transmitting timing being different from the receiving timing by a pulse unit. That is, there is no mention of what to do with the relation between the transmitting timing and the receiving timing, let alone about the transmitting being different from the receiving timing by a pulse unit.

Claim 1 of the present application utilizes a transmitting timing which is different from the receiving timing by a pulse unit, which would allow the transmitter and the receiver to avoid interference between each other. Because both Santhoff and Weaver, Jr. et al. fail to mention this feature, it would not have been obvious to one of ordinary skill in the art to utilize a transmitting timing different from the receiving timing by a pulse unit in the apparatuses disclosed in the cited references.

Accordingly, claims 1 and 4 have been amended to recite that the pulse series signals are transmitted at a predetermined timing which is different from the receiving timing...by a pulse unit in order to prevent a sneak path wave between the receiver and the transmitter.

Thus, the 35 U.S.C. §103(a) rejections should be withdrawn.

Application No. 10/719,028
Amendment dated November 5, 2007
Reply to Office Action of August 7, 2007

5

Docket No.: 80254(302741)

In view of the aforementioned amendments and accompanying remarks, claims 1-4, as amended, are in condition for allowance, which action, at an early date, is requested.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 04-1105.

Dated: November 5, 2007

Respectfully submitted,

By William L. Brooks
William L. Brooks
Registration No.: 34,129
EDWARDS ANGELL PALMER & DODGE
LLP
1875 Eye Street, NW
Washington, DC 20006
(202) 478-7370
Attorneys/Agents For Applicant